

## GREAT VALUE OF TREES

### A FACTOR IN LIFE BEYOND THE COMMERCIAL ONE.

Trees Accomplish a Vast Amount of Work in a Day—Their Struggle For Self-Preservation and the Perpetuation of Their Species.

Most people have formed the habit of talking about shade trees, fruit trees and lumber as if shade, fruit and building materials were all for which the trees were good. Of course the artistic eye looks at them for beauty, the entomologist as harbors for insects and the botanist for herbarium specimens, but the true lover of the tree thinks of it in its wide value to all living things in the universe.

Though trees lack the power of volition and have no nervous system in the ordinary sense of the word, they are highly organized forms of life. They accomplish a vast amount of actual work in a day and earn their living as surely as you and I do. Their work is the world's work of the unselfish kind. They struggle for self-preservation and the perpetuation of their species; they return to the soil and to the atmosphere materials loaned them for food; they are altruistic in providing an abundance of fruit for the use of others, they furnish grateful shade to man and beast, are the refuge of birds and insects and add to the beauty of nature.

Think of the linden tree on the hillside! In autumn it sets sail its winged nuts upon the breeze. Blown down the hillside, a few are buried under the dry leaves and the soft coverlet of winter's snows. In March the sunshine seeks them out. Moisture has softened the tough shell of the nut. The tiny embryo within throbs at the touch of warmth, turns, lifts a hand, and, creeping through a break in the shell, buries itself in the ground. It is the instinctive baby hand grasping a protecting mother, and the kindly stepmother of the infant tree is Mother Earth. This first tiny hand is the hold-fast root. Next comes one waved aloft to greet the sunshine. This tender growth throws aside the out-grown nut shell and develops cell by cell into trunk, branch, twig and leaf of the linden tree. Sunshine, warmth and moisture help it along, but the ambitious little tree knows how to look out for itself as well.

Utilitarians consider the trunk the important part of a tree. The trunk is a wise makeshift of nature which towers aloft and tries to lift the vital organs of the tree—the leaves—out of harm's way and into purer air and brighter sunshine. Beneath the ground the strong roots and rootlets have hundreds of eager, thirsty mouths which take nourishment from the earth. Water and mineral matter are carried upward by the process of capillary attraction to the leaves in the crown and the branches for digestion and assimilation. A leafless tree stands little chance of living. Trees denuded of their leaves by caterpillars and other mischievous things are deprived of their stomachs and lungs at once.

Every leaf on a tree is unceasingly industrious day and night. Examine the linden leaf—or, in fact, any leaf will do, the truth applies to all—and notice how its surface is spread to catch the sunshine. The under side of the leaf has a different appearance. The tissue is tenderer and a network of breathing pores. A section placed under the objective of the microscope reveals tiny cells filled with a greenish liquid called chlorophyll, which plays an important part in the domestic economy of the tree. When undigested food from the ground has been carried to the leaves the chlorophyll seizes it, and under the influence of sunlight changes its nourishment. The chlorophyll also breaks up the carbon dioxide with which it comes into contact, and, liberating the oxygen, sends it out into the atmosphere.

Digested food materials are carried from the leaves to all parts of the tree and aid in its growth. Leaves, as the lungs, are necessary in the process of breathing. Like animals, the tree needs oxygen and breathes much after the manner of a human being. Not only is the life-giving air taken into the lungs, or leaves, but it is inhaled through tiny openings in the bark, just as man and animals transpire through the skin. These tiny breathing holes are called lenticels and may be seen plainly on the bark of cherry, and many other kinds of trees. As the tree drinks water it sweats and exhales water vapor along with oxygen cast off from the carbon dioxide.

Tons and tons of moisture is evaporated from wooded areas. This is another beneficial act. Water vapor in the atmosphere is essential to agriculture. Trees transpire through cracks and fissures in the bark, where the lenticels are hidden from sight. This is especially true in old trees. From time to time scientists have computed the leaf area of trees and the results have been astonishing. An ordinary linden leaf has a surface of ten square inches. Multiply this by the number of leaves on a branch and calculate the leafage area of the tree. This entire surface is liberating oxygen and water vapor day and night.

In the arid sections of the West the people are beginning to see that forestry and irrigation are the factors which will count for their prosperity. About 1,000,000 square miles, or more than one-third of the United States, is forest land. The destruction of forests has been so extravagant that the Government has taken the matter in hand and decided on thirty-eight reservations, where the forests will be under intelligent supervision. There has been some misunderstanding in regard to these reserves. Although the intention is to preserve the forest and encourage the growth of young

trees, at the same time the land available for settlement will be increased. As forests conserve the rainfall and influence the humidity of the atmosphere, newly planted forests will wedge in between farms on the reservations and farms penetrate the clearings in old forests. Sheepherders and settlers must be taught intelligent forestry and tree wisdom spread broadcast over the land before the tree receives the reverential respect due to it. —L. M. McC., in Chicago Post.

#### California Crowding Castile.

Among other incidents of "the American invasion" of European markets the carrying of California fruits to London and Paris in successful competition with what would seem to be the naturally superior facilities of Spanish fruit-growers is not the least astonishing.

Paris is not quite 500 miles distant from Valencia, the great fruit-shipping port of Alphonso's fruit kingdom. Yet, says a Valencia paper, "California oranges, peaches, apples and pears reach Paris, after traversing 6000 miles, in a more attractive and appetizing condition than ours." It goes on to say:

"We can compete with America only by employing her methods—improved cultivation, harvesting and packing, cold storage and rapid, safe transportation. Castile was once called the granary of Europe, yet we have lived to see foreign wheat, after paying heavy transportation taxes, protective duties and an adverse premium of thirty-five per cent. in exchange, competing with our home-grown cereals. Shall we live to see American oranges competing with ours on the Valencia market itself?"

And so it goes all along the line. American ingenuity and "bustle" are compelling the steelmakers of Britain and the fruit-growers of Spain alike to admit that they must imitate us to save their trade.—New York World.

#### Strange Reunion of Brothers.

A remarkable reunion has been effected between two brothers in Henry County, Indiana, after a separation of nearly half a century, during which time each thought the other dead.

Barton and Jabez Guyer lived with their parents in North Carolina. In 1852 Barton left home to make his way in the world. He went to Texas, thence to Mexico, finally returning to Texas, where he located. He wrote his brother repeatedly, but received no reply to his letters and gave him up for dead.

Jabez never received any information from Barton. He lost all trace of him, and likewise mourned him as dead. Barton enlisted in the Confederate army, and served until peace was declared. Jabez later on moved with his family to Henry County, Ind. Recently a relative of the family learned, through a conversation with a traveling salesman, of a man named Barton Guyer in Harrisburg, Texas. A correspondence developed the fact that he was the long-lost brother. Barton came on to meet his brother.—Cincinnati Commercial Tribune.

#### Death to the Fly.

'Tis sad but true that picturesque means of discouraging flies, such as window boxes of curtain flowers, fancy wire screens, etc., are not as effective as one could wish on a hot summer day. Mignonette is supposed to be disliked by the pests, but it does not keep them out of rooms where it is placed, and wire screens are usually more trouble than the flies themselves and "strain" the air to vanishing point. Some people advise eucalyptus plants in all the rooms, others washing the windows, etc., with a strong solution of sassafras or quassia; while all picture frames, etc., which flies haunt, should be well washed in onion water, but, though at times palliatives, these are not perfect cures. An old-fashioned but effective destroyer is said to be a teaspoonful each of cream and brown sugar well blended with half a teaspoonful of freshly-ground black pepper and left about the room on plates. —New York Commercial Advertiser.

#### Pacific Turns Red and Fresh.

Following the earthquake shocks that visited the Pacific coast the other day, a peculiar phenomenon has developed in the waters of the Pacific. Within a distance of sixty-five miles along the Los Angeles County shore line the salty waters, heretofore clear and of the usual greenish color, have become a terra-cotta red.

This color line extends off shore for several miles and is so distasteful to the fish family that they have gone far into the ocean to seek clear waters. At night this colored sea water gives off a phosphorescent light, and as the long lines of waves roll, toss and strike the beaches they cast a reflection that enables one to read average print.

At certain points along the beach the water has turned sweet. The theory is advanced that the earthquake opened a fissure off the coast that forces fresh water and colored matter to the surface.—New York Sun

#### What is a Newspaper?

It is a library. It is an encyclopedia, a poem, a history, a dictionary, a time table, a romance, a guide, a political resume, a ground-plan of the civilized world, a low-price miltum in parvo, says the Newman (Ga.) Advertiser.

It is a sermon, a song, a circus, an obituary, a shipwreck, a symphony in cold lead; a melody of life and death, and a grand aggregation of man's glory and his shame.

It is, in short, a bird's-eye view of all the magnanimity and meanness, the joys and sorrows, births and deaths, the pride and poverty, of the world.

## A PHOENIX GIRL.

What the Little Miss Did When She Saw the Snake.

An incident occurred recently near Phoenix, Ariz., in which a fifteen-year-old girl displayed wonderful presence of mind, and illustrates the value of good judgment and self-possession in all everyday affairs of life, as well as on extraordinary occasions, when the house takes fire, or two trains try to pass on the same track.

In a ranch home not far from town lives a family which, at the time mentioned, had in its employ a nurse to wait upon the lady of the house, who was in delicate health, and the girl referred to, whose duties were to wash the dishes and attend to the minor household affairs.

One afternoon, when the head of the house was away from home, the three women were sitting in a room together, when the girl noticed a snake of considerable size coiled up in a clothes rack, or shelf, some distance above the floor, craning its neck out and waving it to and fro in regular snake fashion. The girl knew the impressionable condition of her mistress and the possible effect upon her of any undue or sudden excitement. Her quick remembrance of this fact and her rapidly evolved plan of action is the proof of her self-possession.

She knew the prevailing weakness of women to scream when anything unusual occurs, and therefore knew she could not even take the nurse into her confidence at once in the matter of the discovery of the snake without great danger of precipitating the climax she desired to avoid. So she quietly said to her mistress: "I think I heard your husband calling you out at the gate." The lady of the house at once withdrew, and as soon as she left the room the girl cautioned the nurse to make no outcry, and seizing the nearest club went after the reptile in a manner that put him out of business in short order. The nurse, of course, could not restrain a little demonstration when she first saw the snake, but she choked herself in short order, and by the time the mistress of the house returned to tell the girl she must have been mistaken about the call, conditions in the room had resumed their usual serenity, and the girl admitted that she must have been dreaming when she fancied she heard the alarm outside.—Arizona Republican.

## WORDS OF WISDOM.

Envy is the disappointment of fools. There is no night where there is no light.

A light tongue often makes a heavy heart.

You cannot kick and haul at the same time.

The policy man doesn't always get the premiums.

The merit that leads great souls to emulation leads little ones to envy.

You can never rule with profit till you have learned to submit with patience.

There may be charity without love but there cannot be love without charity.

A book of plans is a good thing to build a house by but a poor thing to build it out of.

The reason we misunderstand people is that we look at their negative before the print is made.

The impression that truth makes on you may be measured by your expression of it.—Rams Horn.

## The Way Coffee Grows.

Coffee grows more like a cherry than anything else with which people in north temperate latitudes are familiar. The tree, if allowed to grow naturally, will attain a height of twenty feet, though it is often pruned to keep the branches within reach when standing on the ground. For beauty it cannot be excelled, even in the tropics. With its deep green, shining leaves and pure white, fragrant, though transitory, blossom, together with the ripening fruit, it produces a picture peculiarly effective.

The fruit, first a tiny green ball, changes to pale red as it develops, and finally, when ripe, the color is a rich brown. It has a pleasant flavor, though rather sweet and somewhat insipid. Its pit is the coffee bean of commerce. Each fruit contains two beans, which grow with the flat sides together in separate cells, though should one become abortive, the other grows round and fills both cavities.

These rounded berries are separated and sold as Pea Berry Mocha because of their resemblance to the genuine. These abortive cells occur usually toward the ends of the branches and are encouraged by pruning.

## Rubber Tires Increasing.

The rapid increase in the use of the rubber tire is one of the noteworthy features of city life. The general impression is that its noiselessness and the comfort it gives to the occupant of the vehicle are the advantages gained by using it; but a greater advantage still lies in its preserving the vehicle from the deteriorating effect of jarring and jolting. An automobile with metal tires would soon have its machinery jarred and strained out of order. Some tire engines have been fitted with rubber tires, and the experiment is in the highest degree satisfactory. They not only turn corners and cross car tracks without slipping, a most important consideration, but they go not so often to the repair shop. The high speed at which an engine has to be driven over rough streets soon jars some of its parts out of order, but this trouble is minimized by the use of rubber on the wheels.—Philadelphia Record.

In 1871 there were 1208 'buses in London. There are now 3200.

## THE SEA BOTTOM.

Physical Conditions and Forms of Life of the Ocean Depths.

The following facts relating to the deep sea and its forms of life are derived from an address delivered recently by Professor C. C. Nutting, of the Iowa University, who has himself been actively engaged in deep-sea exploration.

Probably the most remarkable of the conditions of deep-sea life is the enormous pressure, which varies, of course, with the depth. At the average depth say, 2000 fathoms, the pressure is about two tons to the square inch of surface, and at 4000 fathoms each square inch of surface is subject to a pressure of about four tons. This fact led the earlier physicists to maintain that organic life was impossible in the great depths. It has been proved, however, that animals of all classes, except the highest vertebrates, have been dredged from even the deepest abysses of the ocean.

The great pressure to which they have been subjected has a curious effect on the deep-sea fishes when they are brought to the surface. Under these circumstances, being released from the accustomed pressure, they fall to pieces, as it were. The eyes bulge out, the swim-bladder protrudes from the mouth, the scales fall off and the flesh comes off in patches. Now, these fishes, disreputable as they appear when brought to the surface, were doubtless respectable enough in their proper habitat. In the depths of the ocean they are doubtless no more conscious of the pressure of four or five tons to the inch than are we of the fifteen pounds of atmospheric pressure under which we live and move and have our being.

Another remarkable condition of life in the ocean depths is that of profound darkness, so far, at least, as sunlight is concerned. It has been found that photographic plates are unaffected beyond a depth of 125 fathoms of clear water, all or the major part of the sun's light having been absorbed before it has reached that depth. Professor Alexander Agassiz assumes as probable that at 200 fathoms the light from the sun is possibly that of a clear starlight night. Below that depth all objects would seem necessarily to be involved in darkness as complete as though they were immersed in a sea of ink. And yet there is evidence tending to prove the presence of light at depths far in excess of this. According to Professor Agassiz, by far the majority of animals living at a depth of about 2000 fathoms have eyes, either like their allies of shallow water, or else rudimentary, or sometimes very large, as the huge eyes developed out of all proportion in some of the abyssal crustaceans and fishes. Without light these organs would, of course, be useless. Sunlight being out of the question, it is now held that the light which enables these animals to see is phosphorescent.

A very large number of crustaceans are highly phosphorescent. Many of those having large eyes are of this class, and are particularly active in movement and voracious in appetite. They feed on minute organisms for the most part, and it can hardly be doubted that they use their phosphorescent powers for the purpose of illuminating their surroundings and revealing their prey.

A third condition of the ocean depths is a temperature uniformly low, probably below forty degrees, while in many cases the temperature is actually below the freezing point of fresh water. This condition is kept up by the ocean currents, the general drift of the surface waters being from the equator toward the poles, while the deep-sea currents are in the opposite direction. The general impression that a high temperature is more favorable than a low one for the best development of animal life is certainly not true of marine animals in general. If other conditions are favorable a luxuriant fauna will be developed in any temperature short of the freezing point of salt water.

## An Elephant Labyrinth.

A curious labyrinth in which elephants are captured alive is to be seen near Ayuthia, formerly the capital of Siam. The labyrinth is formed of a double row of immense tree-trunks set firmly in the ground, the space between them gradually narrowing.

Where it begins, at the edge of the forest, the opening of the labyrinth is more than a mile wide, but as it approaches Ayuthia it becomes so narrow that the elephants cannot turn round.

Suspecting no danger, the wild elephant enters the broad opening at the forest end, lured on by a tame elephant. The gradual narrowing of the boundaries is not observed until the elephant finds himself in close quarters.

Having reached the end of the labyrinth, the tame elephant is allowed to pass through a gate, while men lying in wait slip shackles over the feet of the captives. The sport is a dangerous one, for the enraged elephants sometimes crush the hunters under their feet.

## Feeding an Obstinate Ostrich.

The ostrich which the King sent from Windsor to the Zoo some time ago, has shown his disapproval of his change of quarters by going off his feed. To prevent him committing suicide by starvation the keepers have consequently found it necessary to resort to a process of "stuffing."

While one keeper holds the bird in a corner another, with deftness gained by long practice, seizes the upper part of the beak with one hand and causes the ostrich to open his mouth. Then he thrusts down the unwilling throat a large ball of nourishing food, and the ostrich is left to digest it at leisure.—London Express.

## SUBURBAN ASSOCIATIONS.

List of Officers Together With Time and Place of Meeting.

IN THE ALTER OF THESE ASSOCIATIONS THE FIRES ARE BURNING FOR ALL THE PEOPLE OF THE SUBURBS.

### Citizens' Northwest Suburban Association.

Meetings are Held the First Friday Evening in Each Month in the Town Hall, Tenleytown, D. C.

#### OFFICERS:

President, Charles C. Lancaster; 1st Vice-President, Col. Robt. I. Fleming; 2nd Vice-President, Hon. John B. Henderson; 3rd Vice-President, John Sherman; 4th Vice-President, Rev. Joseph C. Mallon; 5th Vice-President, Rev. J. W. Chappell; Treasurer, Charles E. Morgan; Chairman Executive Committee, Louis P. Shoemaker.

Total Membership about 150.

### Brightwood Avenue Citizens' Association.

Meetings are Held the Second Friday Evening in Each Month in Brightwood Hall.

#### OFFICERS:

President, Louis P. Shoemaker; 1st Vice-President, Wilton J. Lambert; 2d Vice-President, N. E. Robinson; 3d Vice-President, Thomas Blagden; 4th Vice-President, Dr. Henry Darling; Secretary, John G. Keene; Treasurer, N. E. Robinson.

Total Membership about 200.

### North Capital and Eckington Citizens' Association.

Meetings are Held the Fourth Monday Evening in Each Month in the Church of the United Brethren, Corner North Capital and R Streets.

#### OFFICERS:

President, Irwin B. Linton; Vice President, Washington Topham; Treasurer, W. W. Porter; Secretary A. O. Tingley; Executive Committee The officers and Messrs. Jay F. Ban prof, Theo. T. Moore and W. J. Fowler.

Total Membership about 280.

### Takoma Park Citizens' Association.

Meetings are Held the Last Friday Evening in Each Month in the Town Hall, Takoma Park, D. C.

#### OFFICERS:

President, J. B. Kinnear; Vice President, J. Vance Secretary, Benj. G. Davis; Treasurer, G. F. Williams.

Total Membership about 100.

## QUI K RESULTS.

N. Studer's seasonable announcement on 8th page appeared for the first time in our issue of Saturday, Nov. 3, 1900, and the responses were so prompt that on Tuesday, Nov. 6, he wrote the editor as follows:

Anacostia, D. C., Nov. 6, 1900. Dear Sir:—Come over to-morrow. People want already more information in regard to varieties of stock, hence I will have to alter the adv.

Yours, N. STUDER.

On Wednesday he ordered a much larger display adv., which will appear next week. Any square business man, who has something to offer that suburban people want, can use these columns to his financial advantage.

## ...THE LETTER...

Mr. W. A. Hahn, Prop. Hahn's Reliable Dye House, 705 Ninth street, N. W.

Dear Sir:—We find you have been advertising in our columns constantly since July, 1890, when this paper was established.

You are the only business man who was with us then and still remains with us and since you have been advertising in our columns continuously for a period of more than ten years we naturally have a curiosity to know how well you are satisfied with the publicity we have given you.

Respectfully yours, THE SUBURBAN CITIZEN.

## THE REPLY.

Editor Suburban Citizen. Dear Sir:—In answer to your request I will say I am very well satisfied with result from my adv. in your paper. The fact of my adv. being in your paper for over ten years speaks for itself.

Respectfully, W. A. HAHN, 705 Ninth street N. W.

A Pointer.—When you order goods from Hartig, the hardware man, 509 H St., N. E., they come the same day. There is no delay like there is in cases where goods are ordered from Baltimore, Philadelphia, Chicago or other foreign houses.

## FOR SALE.

Several tracts of land near Brightwood and Takoma, also Building Lots on Brightwood Ave., and 14th Street road. Louis P. Shoemaker, 920 F St., N. W.

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